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MSDS Information

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Section 1. CHEMICAL PRODUCT SECTION

Product Name: Vortex(TM) Duster, Vortex(TM) 360 Duster
Product Number: 1697 Aerosol
General Use:
Product Description:

MANUFACTURER: Tech Spray, Inc.
P.O. Box 949
Amarillo, TX 79105-0949
PHONE: 806/372-8523
FAX: 806/372-8750

For Chemical Emergency, Spill, Leak, Fire Exposure, or Accident Call CHEMTREC DAY OR NIGHT 1-800-424-9300.

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Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL	C.A.S. Number	Weight %
1,1,1,2-tetrafluoroethane	811-97-2	100

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	Exposure Limits 8 Hours TWA (PPM)		
	OSHA PEL	ACGIH TLV	Supplier
1,1,1,2-tetrafluoroethane	NIF		1000

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Section 3. HAZARD IDENTIFICATION

Emergency Overview:

Potential Health Effects:

INHALATION: Major potential rout of exposure. Minimal effects observed below 1000 ppm. Dizziness, drowsiness, and throat irritation possible at levels above 1,000 ppm. Unconsciousness and death at levels above 10,000 ppm. Blood pressure depression, cardiac sensitization, and ventricular arrhythmia can result from exposure to near-anesthetic levels.

EYES: Liquid can cause slight, temporary irritation with slight temporary corneal injury. Vapors can irritate eyes.

SKIN: Prolonged or repeated contact with liquid can cause freezing of skin tissues, defatting, and dermatitis.

INGESTION: Single dose toxicity is low to moderate. If vomiting occurs the liquid can be aspirated into the lungs, which can cause chemical pneumonia and systemic effects. Human psychotropic, gastrointestinal, and central nervous system effects possible.

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Section 4. FIRST AID MEASURES

Inhalation:

Move to fresh air in case of accidental inhalation of vapors. If victim has stopped breathing, give artificial respiration. Call for prompt medical attention.

Eye Contact:

Flush eyes with large amounts of water for 15 minutes or until irritation subsides. If irritations persist, get medical attention.

Skin Contact:

Remove contaminated clothing (including shoes) and wash before reuse. Flush with large amounts of water. Use soap if available. If irritation persists, seek medical attention.

Ingestion:

Do not induce vomiting unless directed by a physician. If conscious and alert, give two glasses of water. Seek medical attention immediately.

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Section 5. FIRE FIGHTING MEASURES

Flash Point & Method: None TCC Method

Flammable Limits: LEL: NA UEL: NA

Autoignition Temperature:

GENERAL HAZARD:

Aerosol cans may erupt with force at temperatures above 120 degrees F.

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear self contained, positive-pressure breathing apparatus and avoid skin contact.

FIRE FIGHTING EQUIPMENT:

Water, foam, dry chemical, carbon dioxide.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, fumes and oxides of carbon.

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Section 6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:

Evacuate area. Ventilate area well and avoid breathing vapors. Vapor concentration will be highest along floor and in low lying areas. Pick up liquid on suitable absorbent and store in sealed containers.

WATER SPILL:

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Section 7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient

STORAGE PRESSURE: Atmospheric

GENERAL:

Keep container closed when not in use. Store in cool, well ventilated place out of direct sunlight and away from incompatible materials. (See STABILITY AND REACTIVITY Section 10.) Follow all MSD Sheet and Label warnings even after container is emptied.

Section 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls:

(X) Local Exhaust ventilation acceptable.
( ) Mechanical ventilation recommended.
( ) Use explosion-proof ventilation equipment.
( ) Do not use in confined spaces without mechanical ventilation equipment.

See section 2 for component exposure guidelines.

Personal Protection:

RESPIRATOR:

If concentrations are over the exposure limit and are known, air purifying respirator with Organic Vapor Cartridges may be acceptable. Refer to cartridges for acceptable levels. If concentrations are over exposure limit and are unknown, use a supplied air respirator.

HAND PROTECTION:

(X) Gloves recommended

(X) Solvex	(X) Neoprene
(X) Butyl	(X) Buna
(X) Natural Latex	(X) Cotton/Jersey

EYE PROTECTION:

(X) Safety Glasses ( ) Chemical Goggles ( ) Full Face Shield

OTHER RECOMMENDATIONS:

( ) Rubber Boots ( ) Splash-proof chemical resistant suit/apron

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Density	1.202	pH	7-8
Boiling Point	-16C / -27F	% Volatile	100
Freezing Point	NIF	% Solids	0
Vapor Density (Air=1):	3.0	Evaporation Rate (H2O=1)	>1
Solubility in Water	0	Viscosity	N/A
Molecular Weight	N/A	Physical State	LIQUID
Non-Exempt VOC (g/l)	0	Odor	NIF

Appearance: Clear water-white liquid with low odor.

Section 10. STABILITY AND REACTIVITY

GENERAL:

STABLE

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Contact with open flame, heat.

Reactive alkali metals, strong acids & bases.

HAZARDOUS DECOMPOSITION:

Hydrogen fluoride, carbon dioxide, and carbon monoxide

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Section 11. TOXICOLOGICAL INFORMATION

RESULTS OF COMPONENT TOXICITY TEST PERFORMED:

Information not available.

HUMAN EXPERIENCE:

Information not available.

This product does not contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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Section 12. ECOLOGICAL INFORMATION

FURTHER INFORMATION:

Information not available.

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Section 13. DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 Classification:

Federal, State, and Local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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Section 14. TRANSPORTATION INFORMATION

U.S. DOT Information:

Proper Shipping Name: CONSUMER COMMODITY ORM-D

Hazard Class: N/A

Packaging Group: N/A

UN Number: N/A

Limitations:Must place CONSUMER COMMODITY ORM-D on box. Must have a copy of the DOT-E-10232 with each shipment.

IATA

Proper Shipping Name: CONSUMER COMMODITY ID8000

Hazard Class: 9

Packing Group: N/A

UN Number: ID8000

Limitations: A copy of the DOT-E-10232 must be attached to the shipment.

Domestic shipments only. When shipping International contact Tech Spray shipping department. Must have a copy of the DOT-E-10232 with each shipment.

IMO

Proper Shipping Name: AEROSOLS IN LIMITED QUANTITIES OF CLASS 2

Class: 2.0
UN Number: UN1950
Packaging Group: N/A
EMS: 2-13
MFAG: 350
Marine Pollutant: N/A
Canadian TDG: N/A
IMDG Page: 2102
Limitations:

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Section 15. REGULATORY INFORMATION

UNITED STATES FEDERAL REGULATIONS:

MSDS complies with OSHAs Hazard Communication Rule, 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 117, 302:
--- None of the chemicals are Superfund hazards ---

SARA SUPERFUND AND REAUTHORIZATION ACT OF 1986
TITLE III Sections 302, 311, 312 and 313:

Section 302 - Extremely hazardous substances (40 CFR 355):
--- None of the chemicals are Section 302 hazards ---

Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370)
( ) By our hazard evaluation, this product is non-hazardous.
(X) By our hazard evaluation, this product is hazardous. It should be reported under the following EPA hazard.
(X) Immediate (acute) health hazard
( ) Delayed (chronic) chronic health hazard
( ) Sudden release of pressure hazard
( ) Reactive hazard
( ) Flammable

Section 313 - List of Toxic Chemicals (40 CFC 372)
This product contains the following chemicals (at levels of 1% or greater) which are found on the 313 list of Toxic Chemicals.

CHEMICAL	C.A.S. NUMBER	WEIGHT %
--- None of the chemicals are 313 Toxic Chemicals ---		

TOXIC SUBSTANCE CONTROL ACT (TSCA): All substances are TSCA Listed.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA 40 CFR 261) Subpart C & D:
Refer to Section 11. for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (FORMERLY SECTION 307), 40 CFR 116 (FORMERLY SECTION 311)
This product contains the following chemicals which are listed:

CHEMICAL	C.A.S. NUMBER	WEIGHT %

CLEAN AIR ACT: --- No Information ---

STATE REGULATIONS:
CALIFORNIA PROPOSITION 65:
This product contains the following ingredients which appear on the California proposition 65 list:

CHEMICAL	C.A.S. NUMBER	WEIGHT %
--- None of the chemicals are on the Proposition 65 list ---		

INTERNATIONAL REGULATIONS:
CANADA WHMIS: Class A, Class D Division 2B
EUROPE EINECS NUMBERS: Tetrafluoroethane; 811-97-2

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Section 16. OTHER INFORMATION

LABEL INFORMATION:
European risk and Safety Phrases: S2, S23, S24/25, S51
European Symbols Needed: NONE
Canadian WHMIS Symbols: NIF

NFPA HAZARD RATING:
(0) Fire (1) Health (1) Reactivity

REVISION DATES, SECTIONS, REVISED BY:
19-JUN-00, Created. B. Riffel
24-APRIL-02, Reviewed S. Redline

ABBREVIATIONS USED IN THIS DOCUMENT:
NE - Not Established, NA - Not Applicable, NIF - No Information Found

REFERENCES:
Code of Federal Regulations (CFR)
The Sigma-Aldrich Library of Regulatory and Safety Data
Chemical Guide and OSHA Hazard Communication Standard
Various Federal, State & Local Regulations

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